Issue 6
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# SHARP: Bringing HAIs into Focus

Surveillance for Healthcare-Associated and Resistant Pathogens Unit, Michigan Department of Community Health

www.michigan.gov/hai

## In this issue



## MDCH Influenza Update

The 2013-2014 Michigan influenza season has arrived, bringing with it a rapid increase in influenza activity. By the week ending December 21, 2013, the spread of influenza was at "regional" levels, and during the week ending January 11, 2014, that increased to "widespread" across the entire state. Currently, more than 90 percent of positive influenza specimens at the MDCH Bureau of Laboratories are the 2009 A/H1N1 influenza virus.

There has been an increase in patients of all ages being admitted to hospitals for serious influenza disease. To date, a larger proportion of these hospitalizations are occurring in young and middle-age adults as compared with most influenza seasons. During the 2009 H1N1 pandemic, severe disease was also seen in young and middle-age adults. Patients with underlying medical conditions or obesity have an increased risk for severe complications from this virus.

One pediatric influenza-associated death has been reported in Michigan during this season. MDCH does not require reporting of adult influenza-associated deaths, but has received reports of at least twelve so far this season, including some in young and middle-age adults. In addition, six respiratory outbreaks in congregate facilities have been reported; 3 of these have been confirmed as due to influenza.

Any flu infection carries a risk of serious complications, hospitalization or death, even among healthy children and adults.

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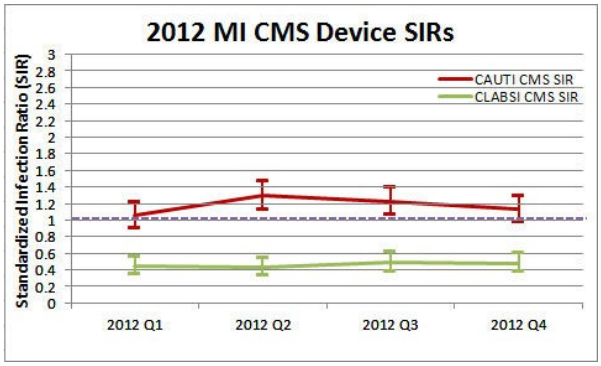
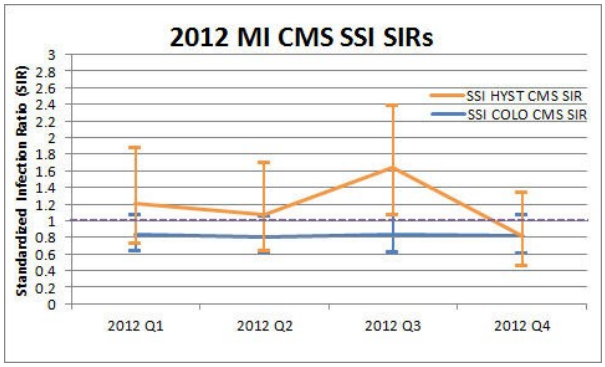
## Michigan 2012 Annual Report Data Highlights

The 2012 Michigan Annual HAI Surveillance Report is expected to be released to the public in February, 2014. This report covers aggregate data from calendar year 2012. An important factor in HAI Surveillance is the Standardized Infection Ratio (SIR), which compares observed or counted infections to the number of infections predicted (using risk adjustment provided by CDC's NHSN). The figure below titled, "2012 MI CMS Device SIRs", provides a demonstration of SIRs for CAUTI and CLABSI. The purple line in this image shows a reference line at an SIR of 1, which indicates that the same number of infections occurred as were predicted. Michigan has historically had low CLABSI SIRs, shown in green. The bars above and below each point indicate a 95% confidence interval. If the reference line of 1 is not within the bars (as in CLABSIs on this graph), then it is statistically significantly different from 1. In this case, Michigan has shown consistently to have statistically significantly fewer CLABSIs than predicted. The CAUTI trend line (red) does go above 1; however, only two of the quarters in 2012 were statistically significantly greater than 1. On the "2012 MI CMS SSI SIRs" graph, the CMS-mandated COLO and HYST procedure SIRs are displayed. The COLO SIR (blue) remained below one throughout 2012; however, none of these quarters showed statistically significantly fewer infections than predicted. The HYST SIR (orange) was slightly above one for all four quarters, but only quarter 3 displayed statistically significantly more infections than expected. These graphs are only a preview into what is to come with the release of the 2012 MI Annual HAI Surveillance Report!




-Allison Murad, murada@michigan.gov

## MDCH Influenza ,

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Last season, national estimates showed only 40.8 percent of Michigan's residents were vaccinated against influenza. According to Michigan's immunization registry, only 9 percent of residents ages 18-24 and 11 percent of residents between 25-49 received influenza vaccine. Michigan lags behind U.S. estimates for flu vaccine coverage in every age group and ranks 42nd in the nation for flu vaccine coverage.

MDCH is encouraging college health centers, medical practices, health departments, pharmacists, and other immunization providers to routinely assess the vaccine needs of all their patients and make a strong recommendation for flu vaccination.

For more influenza information, including the weekly MI Flu Focus influenza surveillance newsletter, visit *www.michigan.gov/flu*. If you are interested in receiving the MI Flu Focus newsletter via email, please contact Susan Peters at *PetersS1@michigan.gov.*

## MDCH HCP Flu Vaccines

The MDCH Immunizations Division recently released a summary of their hospital healthcare personnel (HCP) flu vaccination policy survey.

65% of hospitals reported a mandatory influenza vaccination policy for all HCP, with 49% of the policies allowing unvaccinated HCP to wear a mask in lieu of vaccination during flu season. Hospitals with mandatory influenza vaccination policies reported 94% influenza vaccination coverage during the 2012-13 season, compared to 65% coverage in hospitals without mandatory policies.

A copy of this summary is posted under HAI Surveillance and Prevention Plan & Reports at *www.michigan.gov/hai*.

# 2014 Patient Safety Changes and Release of NHSN 8.1

Patient Safety Protocol and Reporting Changes are mentioned in the December 2013 issue of the ***NHSN e-News*** released by CDC. Several of the important changes are listed below, however, the December ***protocol updates*** should be read for **ALL changes** that will occur in 2014.

**Changes to CLABSI Reporting in 2014**

- Surveillance and reporting is now required for in-plan Mucosal Barrier Injury-Laboratory Confirmed Bloodstream Infection (MBI-LCBI) events. Additional info regarding this can be found in the CLABSI chapter of the NHSN Patient Safety Component manual.
- The definition of neutropenia in the MBI-LCBI criteria has been expanded to include the 3 calendar days ***after*** the positive blood culture. Thus, the revised neutropenia definition used for 2014 will be: "2 days of absolute neutrophil count (ANC) or white blood cell (WBC) count less than 500 cells/mm3 within the time period surrounding the positive blood culture – the 3 calendar days before, the day of, and the 3 calendar days after."
- There is a new optional question on the BSI form: "Any hemodialysis catheter present?" to track the proportion of CLABSIs that may be related to CVCs used for hemodialysis.

**Changes to Ventilator-Associated Reporting in 2014**

- **In-plan** pedVAP surveillance will no longer be available in neonatal ICU (NICU) locations in NHSN. Healthcare facilities may still conduct **off-plan** pedVAP surveillance in NICUs using the NHSN definitions for their own internal use. This change will affect only NICUs and other neonatal locations; pediatric ICUs and other pediatric locations will not be affected.
- PedVAP in-plan reporting will be conducted by patient care location type. Therefore, ventilated patients who are 18 years of age and older and in pediatric units can be included in pedVAP surveillance. VAE surveillance will become patient location-based, rather than patient age-based. VAE surveillance will be restricted to adult inpatient locations.
- The definitions of "daily minimum PEEP" and "daily minimum FiO2" will be modified to read "the lowest setting of PEEP or FiO2 during a calendar day that is maintained for at least 1 hour." In units where ventilator settings are monitored and recorded less frequently than once per hour, the daily minimum PEEP and FiO2 values for VAE surveillance will simply remain the lowest values of PEEP and FiO2 recorded for the calendar day.
- Additional instructions will be provided in the January 2014 VAE protocol for facilities using the purulent respiratory secretions criterion to meet Possible and Probable VAP definitions.
- The list of antimicrobial agents eligible for use in meeting the IVAC definition will be refined in the January 2014 VAE protocol.

**Changes to SSI Reporting in 2014**

- A diabetes data field (Y/N) has been added to the 2014 SSI form. A Yes (Y) response should be indicated if the patient is a diagnosed diabetic on the basis of documentation in the medical record regarding diabetes management, either with insulin or an oral antidiabetic agent. Indicate No (N) if the patient has no known diagnosis of diabetes, or a diagnosis of diabetes that is controlled by diet alone. If this information is unavailable in the patient chart, default to No (N) until a system is in place to capture this information. **This data will be optional for 2014 but will become mandatory for all NHSN users in 2015.**
- There are new definitions for incisional closure type for SSI events in NHSN version 8.1. If any portion of the incision is **closed at the skin level, by any manner**, a designation of "primary closure" should be assigned to the surgery. (Do not rely on the clinician's definition of primary closure as this may differ from the NHSN definition.) Any closure not meeting the definition of primary closure is by default classified as "non-primary closure". NHSN users who lack time or resources to capture this information in 2014 should continue to report the procedure denominators exactly as done in 2013 but should make every attempt to set up a system for obtaining this information during 2014.
- The definition of "duration of an operative procedure" has been changed to "the interval in hours and minutes between the Procedure/Surgery Start Time (PST) and the Procedure/Surgery Finish Time (PF) when all instrument and sponge counts are completed and verified as correct, all postoperative radiologic studies to be done in the OR are completed, all dressings and drains are secured, and the physicians/surgeons have completed all procedure-related activities on the patient. Generally, this information can be found in the operative record, but if not, IPs should work with their OR liaisons to make sure that this information is available to them.
- Patient height and weight must now be entered into the "Denominator for Procedure" form.

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# Carbapenem-Resistant *Enterobacteriaceae* (CRE) Surveillance and Prevention Initiative Update

**CRE Partners in Prevention**

The CRE Surveillance and Prevention Initiative held its quarterly *CRE Partners in Prevention* call on December 18th. During the call, one facility discussed their mass educational effort, CRE confirmatory testing, and their collaboration with other facilities on a point-prevalence survey. Another facility discussed the implementation of a monitoring program for isolation compliance using iPads, their educational efforts and future hand hygiene audits. The call is an opportunity for facilities to collectively share and discuss approaches to CRE prevention.

**Prevention Plan Progress within Facilities**

The CRE Surveillance and Prevention Initiative is coming upon the 2nd 6-month check on the status of each facility's CRE Prevention Plan. Prevention plans implemented may involve education, compliance, policy and procedure changes, confirmatory testing, communication, etc. Facilities will be reporting in the status of their intervention, successes and any barriers they are encountering.

**CRE Surveillance and Prevention Initiative Expanding – Enroll Now!!**

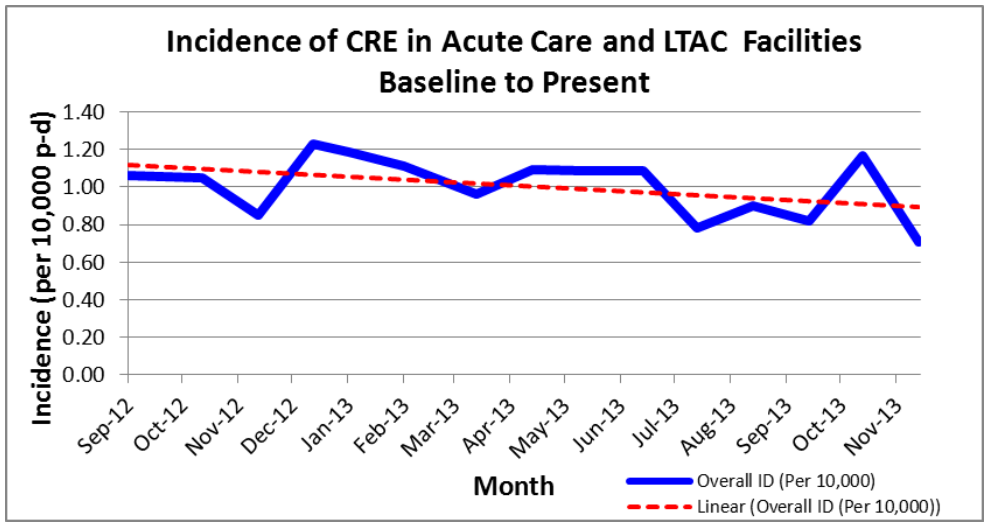
Starting in March, the CRE Surveillance and Prevention Initiative will be opening enrollment to any interested facilities. This applies to acute care facilities, long-term acute care facilities, and skilled nursing facilities. Applications to enroll will be sent out by various listservs. We would like to enroll 15-20 additional facilities to expand our statewide coverage.

Benefits of participating in the initiative include:

- Receiving monthly reports detailing facility-specific data as well as overall-initiative data
- Receiving monthly newsletter (CRE News) to keep you updated on all initiative activities, dates, and training
- Learning from other partner-facilities sharing lessons learned and experiences with implementing CRE prevention
- Access to infection prevention experts and medical professionals for consultation
- Receiving tools, tips, and guidance that will help busy professionals within your facility
- Becoming a partner in a regional approach to prevent CRE from becoming hyper-endemic in MI

For more information on how to enroll in the CRE Surveillance and Prevention Initiative, please contact Brenda Brennan at brennanb2@michigan.gov

*The graph below illustrates decreasing incidence in CRE reported by acute care and long-term acute care facilities enrolled in the CRE Surveillance and Prevention Initiative.*




## NHSN Protocol Update and 8.1 Release

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The next release of NHSN (8.1) is expected in late January or early February, 2014. NHSN users are expected to follow all updated 8.1 guidance for changes in definitions, rules, and criteria for identified events on January 1, 2014. Data from events and procedures that occur on or after January 1, 2014 should therefore be collected according to the new protocols on paper copies of the new forms until data entry capability becomes available in NHSN (after the release of NHSN version 8.1).

**2014 CMS Rule Clarification**

For Medicare patients, their Medicare Beneficiary Number (MBN) must be entered on all NHSN **event** records; the MBN is not required to be entered on NHSN **procedure** records for Medicare patients at this time.

**2014 Facility Survey**

Each facility's **2013** Annual Facility Survey should be completed early in 2014 (applies to general Acute Care Hospitals, Inpatient Rehab Facilities (IRFs), Long-Term Acute Care Facilities (LTACs), and Ambulatory Surgery Centers (ASCs). These surveys must be completed by March 1, 2014. –Judy Weber, weberj4@michigan.gov

## SHARP Staff Changes

As of the end of 2013, Bryan Buckley is no longer with the SHARP Unit. We wish him well in his new position at the Michigan Health and Hospital Association, Patient Safety Organization!

MRSA/CDI data questions can be directed to either Gail Denkins or Noreen Mollon, and CRE data questions can be directed to Brenda Brennan, via the SHARP Unit email at MDCH-SHARP@michigan.gov.

Judy Weber will be on leave beginning in late January 2014, and will return to the SHARP Unit part-time in the Spring. In the meantime, please contact Allie Murad with all NHSN-related questions or requests at: murada@michigan.gov.

## Events/Calendar

Please visit our SHARP Unit Calendar, found on the SHARP Unit homepage. If you would like to add an event to this calendar, please email: MDCH-SHARP@michigan.gov.

## Helpful Links

www.michigan.gov/hai

www.mhakeystonecenter.org

www.mpro.org

www.mi-marr.org

www.msipc.org

www.apic.org

www.hhs.gov/ash/initiatives/hai/

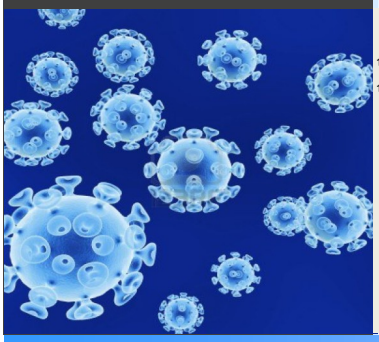
www.hospitalcompare.hhs.gov

www.cdc.gov/nhsn

www.cdc.gov/HAI/prevent/prevention.html

www.cdc.gov/HAI/organisms/cre

www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html



## National Estimates: Invasive MRSA Burden Falling

A recent publication from the CDC's Active Bacterial Core Surveillance (ABCs) Emerging Infection Program suggests that the rate of invasive MRSA infections (cultured from normally sterile sites) is falling nationwide.

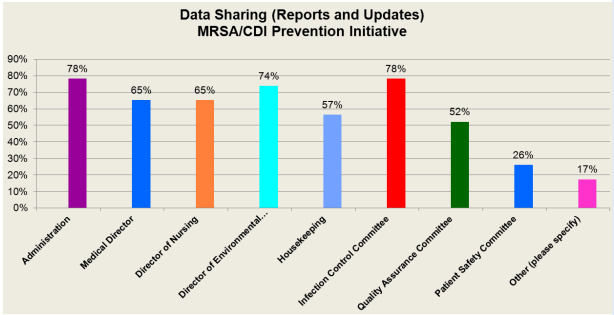
ABCs is an active laboratory- and population-based surveillance system for six invasive bacterial pathogens of public health importance (group A and group B *Streptococcus* (GAS, GBS), *Haemophilus influenzae*, *Neisseria meningitidis*, *Streptococcus pneumoniae*, and methicillin-resistant *Staphylococcus aureus* (MRSA)). This recent report summarizes invasive MRSA findings from 9 US metropolitan areas from 2005 through 2011. Cases are classified as:

- Health care–associated community-onset (HACO) infections: cultured ≤3 days after admission and/or prior year dialysis, hospitalization, surgery, long-term care residence, or central vascular catheter presence ≤2 days before culture
- Hospital-onset infections: cultured >3 days after admission
- Community-associated infections: none of above criteria met

Since 2005, adjusted national estimated incidence rates decreased in all categories: HACO by 27.7%; hospital-onset by 54.2%; and community-associated by 5.0%. An estimated 30,800 fewer invasive MRSA infections occurred in the United States in 2011 compared with 2005. In 2011, more infections occurred among persons in the community (without recent health care exposures) than occurred among patients during hospitalization. Effective strategies for preventing infections outside acute care settings will have the greatest impact on further reducing invasive MRSA infections nationally.

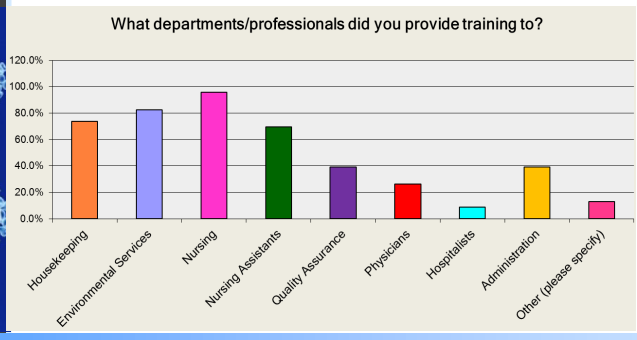
*See the full report, published November 25, 2013 in JAMA (National Burden of Invasive Methicillin-Resistant Staphylococcus aureus Infections, United States, 2011 http://archinte.jamanetwork.com/article.aspx?articleid=1738718).*

## MRSA/CDI Prevention Initiative Update




A 25 question survey for MRSA/CDI champion feedback was developed and emailed to all 25 facility champions plus a local public health demonstration project in Fall of 2013. There was an 88.5% response rate to this survey which investigated 6 areas of involvement: training and education, operation, communication and monitoring.

Champions indicated that staff and departments included in their prevention/education efforts were nursing, environmental services, nursing assistants, physician groups, and administration. Policy and procedures which had been updated since joining the initiative included healthcare worker education, cleaning and disinfection of patient/resident equipment, and contact precautions.




Respondents indicated that they most often work with acute care facilities, nursing homes, physician offices, home health agencies, and local public health departments in their communities.- Noreen Mollon, MollonN@michigan.gov



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